

Europeana Data Model (EDM)

This document was created in the context of the ASCH project¹. It analysis the applicability of EDM according to the requirements defined by the ASCH project.

EDM is the metadata model Europeana developed for the description of European cultural heritage objects in Europeana. It is based on the principles of Semantic Web and Linked Open Data and is not only used by Europeana but by many Europeana partners and projects. Most of these partners and projects (like the German Digital Library²) extend and refine the model for their own purpose developing context specific application profiles³. In contrast to common approaches terms used by Europeana are of different origin. Beside terms defined by Europeana itself (in the edm namespace) it uses terms from die following namespaces:

- rdf (Resource Description and Framework) and rdfs (RDF Schema),
- ore (OAI Object Reuse and Exchange),
- skos (Simple Knowledge Organization System,
- dc (Dublin Core Metadata Element Set), dcterms (DCMI Metadata Terms) and dctype (DCMI Type Vocabulary),
- dcat (W3C Data Catalog Vocabulary),
- CC (Creative Commons).

¹ <http://asch.wiki.gwdg.de/index.php/asch>About>

² <https://www.deutsche-digitale-bibliothek.de>

³ See:
http://pro.europeana.eu/files/Europeana_Professional/EuropeanaTech/EuropeanaTech_taskforces/Mapping_Refinement_Extension//EDM%20%20Mapping%20refinement%20extension%20Report.pdf

On <http://pro.europeana.eu> Europeana provides a bunch of documents about the model and its usage, including mapping guidelines and schemas.⁴ The following analysis about the reusability of EDM for the description of collection items and their provenance uses the EDM Definitions⁵, a set of properties and classes that can be used in the Europeana context but is not implemented by Europeana completely till now and the EDM Object Templates⁶.

Resource	Superclass of all classes used in the model	Entity	Resource	http://www.w3.org/2000/01/rdf-schema#Resource	This is the class of all resources	<code><rdf:type rdf:resource="rdfs:Resource"/></code>	✓
[Requirement 6]	Resources must be identified by identifiers that are unique, machine readable and persistent.		about	http://www.w3.org/1999/02/22-rdf-syntax-ns#about	.	<code><rdfs:Resource rdf:about="http://d-nb.info/gnd/118624792/></code>	✓
[Requirement 7]	Resources must be identified by a name/appellation that allows to distinguish between resources of the same type	Property	title	http://purl.org/dc/elements/1.1/title	A name given to the resource.	<code><dc:title>Brustbildnis des Somali Hassanó</dc:title></code>	✓
[Requirement 8]	The nature of a resource must be described using 1-n controlled values.	Property	hasType	http://www.europeana.eu/schemas/edm/hasType	This property relates a resource with the concepts it belongs to in a suitable type system such as MIME or an thesaurus that captures categories of objects in a given field (e.g. the "Objects" facet in Getty's Art and Architecture Thesaurus). A resource may have 0 to	<code><edm:hasType rdf:resource="http://vocab.getty.edu/aat/300191918"/></code>	✓

⁴ <http://pro.europeana.eu/page/edm-documentation>

⁵ http://pro.europeana.eu/files/Europeana_Professional/Share_your_data/Technical_requirements/EDM_Documentation//EDM%20Definition%20v5.2.6_01032015.pdf

⁶ <https://github.com/europeana/corelib/wiki/EDMObjectTemplatesEuropeana>

					many types.		
[Requirement 9]	Resources can be interlinked with 0-n other resources.	Occurrence		Most properties used in EDM are repeatable.		<dc:subject rdf:resource= http://vocab.getty.edu/aat/300112061/ > <dc:subject rdf:resource= http://vocab.getty.edu/aat/300008932/ >	(✓)
[Requirement 10]	Resources must be interlinked with each other using unique, machine readable and persistent identifiers.	Values		For EDM properties used with non-literal values see . http://pro.europeana.eu/files/Europeana_Professional/Share_your_data/Technical_requirements/EDM_Documentation//EDM_Mapping_Guidelines_v2.2.pdf		<dc:creator rdf:resource=" http://d-nb.info/gnd/40600-4/ ">	✓
[Requirement 11]	The nature of the relation between two resources can be specified using controlled values.	Property					X
[Requirement 12]	The relation between two resources can be specified by the time this relation was valid.	Property					X
[Requirement 71]	Topics of information resources must be described using controlled values	Property	subject	http://purl.org/dc/elements/1.1/subject	The topic of the resource.	<dc:subject rdf:resource= http://d-nb.info/gnd/4448739-3/ >	✓
[Requirement 72]	Resources used as access points must be identified as instances of one or more classes.	Property	type	http://www.europeana.eu/schemas/edm/type	The Europeana material type of the resource.	<edm:type>TEXT</edm:type>	✓
Metadata Set	The machine readable description of a single resource by statements.	Entity	Dataset	http://www.w3.org/TR/vocab-dcat/#class-dataset	A collection of data, published or curated by a single agent, and available for access or download in	<rdf:type rdf:resource="http://www.w3.org/TR/vocab-dcat/#class-dataset"/>	✓

					one or more formats.		
[Requirement 1]	Resource descriptions must be machine readable.			EDM provides a machine readable structured description of resources in RDF			✓
[Requirement 2]	Resource descriptions must be compliant to the one-to-one principle			EDM provides different Classes to differentiate between different resources (e.g. between the ProvidedCHO and the WebResource.			✓
[Requirement 3]	A resource description must provide all attributes necessary to identify the resource and distinguish it from other resources of the same type.	Property		EDM provides a wide range of terms sufficient for the identification and differentiation of resources			✓
[Requirement 4]	Resource descriptions must be identified by identifiers that are unique, machine readable and persistent.		about	http://www.w3.org/1999/02/22-rdf-syntax-ns#about	.	<dc:dataset rdf:about="http://d-nb.info/gnd/118624792">	✓
[Requirement 5a]	Creation of resource descriptions must be documented by time stamps.	Property	created	http://purl.org/dc/terms/created	Date of creation of the resource.	<dcterms:created>2015-03-21</dcterms:created>	✓
[Requirement 5b]	Modification of resource descriptions must be documented by time stamps.	Property					✗
[Requirement 63]	Resource descriptions must include information about the reusability of these descriptions (e.g. license information)	Property	rights	http://purl.org/dc/element s/1.1/rights	Information about rights held in and over the resource	<dc:rights resource="http://creativecommons.org/publicdomain/zero/1.0"/>	✓
[Requirement 64]	Resource descriptions must be compliant to a cross-domain or domain-specific metadata standard.			EDM is a cross-domain standard used for the description of cultural heritage objects of different areas (archives, museums, libraries etc.)			✓

[Requirement 65]	Resource descriptions must refer to the used metadata standard(s)	Property	conformsTo	http://purl.org/dc/terms/conformsTo	An established standard to which the described resource conforms to.	<dcterms:conformsTo rdf:resource="https://www.openarchives.org/OAI/2.0/oai_dc.xsd"/>	✓
Item	A real world thing in a collection	Entity	ProvidedCHO	http://www.europeana.eu/schemas/edm/ProvidedCHO	This class comprises the Cultural Heritage objects that Europeana collects descriptions about.	<rdf:type rdf:resource="http://www.europeana.eu/schemas/edm/ProvidedCHO"/>	✓
[Requirement 13]	Item descriptions can be interlinked with evidence.	Property	isReferencedBy	http://purl.org/dc/terms/isReferencedBy	A related resource that references, cites, or otherwise points to the described resource.	<dcterms:isReferencedBy rdf:resource="http://telota.bba.w.de/AvHBriefedition/#/1"/>	✓
[Requirement 20]	Item descriptions must be interlinked with 1-n events in the lifecycle of the item.	Property	hasMet	http://www.europeana.eu/schemas/edm/hasMet	edm:hasMet relates a resource with the objects or phenomena that have happened to or have happened together with the resource under consideration.	<edm:hasMet resource="ex:myCollectionEvent"/>	✓
[Requirement 75]	Items must be identified by identifiers that are unique, machine readable and persistent.	Property	about	http://www.w3.org/1999/02/22-rdf-syntax-ns#about		<rdfs:Resource rdf:about="DE-MUS-789911/lido/Wig74">	✓
[Requirement 76]	Items must be identified by a name or appellation.	Property	title	http://purl.org/dc/elements/1.1/title	A name given to the resource.	<dc:title>Lade der Frisörinnung Eckernförde</dc:title>	✓
[Requirement 42]	For items a digital representation/copy can be available.	Property		The relation between an item and its digital representation has to be built via ore:Aggregation.		<ore:Aggregation rdf:about="ex:myAggregation"><edm:aggregatedCHO rdf:resource="DE-MUS-789911/lido/Wig74"/><edm:isS	✓

						hownBy rdf:resource="urn:nbn:de:bsz:105-db-id4104242509"/></ore:Aggregation>	
[Requirement 44]	Items can be represented by digital representations in different resolutions.	Property		The following properties have to be used to describe the relation between an ore:Aggregation and edm:WebResources: <ul style="list-style-type: none"> • edm:isShownAt (not repeatable) • edm:isShownBy (not repeatable) • edm:hasView (repeatable) • edm:object (not repeatable) 		<edm:object rdf:resource="http://digital.ub.tu-freiberg.de/fileadmin/data/410424250/410424250_tif/jpegs/0000001.tif.large.jpg"/><edm:hasView rdf:resource="http://digital.ub.tu-freiberg.de/fileadmin/data/410424250/410424250_tif/jpegs/0000001.tif.small.jpg"/>	✓
[Requirement 51]	Item descriptions must be assigned to 1-n collections.	Property	isPartOf	http://purl.org/dc/terms/isPartOf	A related resource in which the described resource is physically or logically included. dcterms:isPartOf is repeatable	<dcterms:isPartOf rdf:resource="http://digital.ub.tu-freiberg.de/fileadmin/data/410424250/410424250_tif/jpegs/0000001.tif.large.jpg"/><dcterms:isPartOf rdf:resource="http://digital.ub.tu-freiberg.de/fileadmin/data/410424250/410424250_tif/jpegs/0000001.tif.small.jpg"/>	✓
[Requirement 52]	All items of a collection must be interlinked with the collection using		rdf:about	Both are identified by unique identifiers using rdf:about and rdf:resource.		<edm:ProvidedCHO rdf:about="DE-MUS-	✓

	unique, machine readable and persistent identifiers.		rdf:resource			789911/lido/Wig74"><dcterms:isPartOf rdf:resource="http://ld.zdb-services.de/resource/organisations/DE-MUS-056315"/></edm:ProvidedCHO>	
[Requirement 77]	Item descriptions must interlink with information about the current location of the item.	Property	currentLocation	http://www.europeana.eu/schemas/edm/currentLocation	The geographic location and/or name of the repository, building, site, or other entity whose boundaries presently include the resource.	<edm:currentLocation rdf:resource="http://vocab.getty.edu/tgn/7005246"/>	✓
[Requirement 59]	Item descriptions must provide machine readable information about the accessibility and usability of items.	Property	rights	http://purl.org/dc/elements/1.1/rights	Information about rights held in and over the resource.	<dc:rights>Items of this project can only be read and used by members of myProject</dc:rights>	✓
Evidence	A resource proving the reliability of a statement about a resource.	Entity					✗
[Requirement 15]	Evidences can be machine readable.			Out of scope			
[Requirement 16]	The nature of an evidence must be described by 1-n controlled values	Property	hasType	http://www.europeana.eu/schemas/edm/hasType	This property relates a resource with the concepts it belongs to in a suitable type system such as MIME or an thesaurus that captures categories of objects in a given field (e.g. the "Objects" facet in Getty's Art and Architecture Thesaurus).	<edm:hasType rdf:resource="http://purl.org/dc/terms/BibliographicResource"/>	✓

					A resource may have 0 to many types.		
[Requirement 17]	Information about resources in an evidence must be identified by unique identifiers.	Property		Out of scope			X
[Requirement 18]	Information about the nature of a resource in an evidence must be identified by 1-n controlled values.	Property		Out of scope			X
[Requirement 78]	Evidence descriptions must provide information about the accessibility and reusability of the resource.	Property	rights	http://www.europeana.eu/schemas/edm/rights	Information about copyright, usage and access rights of the digital object in Europeana that represents the source cultural heritage object described in the data.	<edm:rights rdf:resource=" http://creativecommons.org/publicdomain/zero/1.0/ " />	✓
Event	An activity in the lifecycle of a resource	Entity	Event	http://www.europeana.eu/schemas/edm/Event	An event is a change “of states in cultural, social or physical systems, regardless of scale, brought about by a series or group or coherent physical, cultural, technological or legal phenomena” (E5 Event in CIDOC CRM) or a “set of coherent phenomena or cultural manifestations bounded in time and space” (E4 Period in CIDOC CRM).	<rdf:type rdf:resource="http://www.europeana.eu/schemas/edm/Event" />	✓
[Requirement 79]	Event descriptions can be interlinked with evidence about the event (e.g.	Property	isReferencedBy	http://purl.org/dc/terms/isReferencedBy	A related resource that references, cites, or otherwise points to the	<dcterms:isReferencedBy rdf:resource="http://telota.bba	✓

	documents)				described resource.	w.de/AvHBriefedition/#/1"/ >	
[Requirement 21]	Event descriptions must be machine readable.			EDM supports a machine readable structured description of resources in RDF.			✓
[Requirement 22]	Event descriptions must show the nature of the relation between items, agents, places and/or time.	Property	hasType	http://www.europeana.eu/schemas/edm/hasType	This property relates a resource with the concepts it belongs to in a suitable type system such as MIME or an thesaurus that captures categories of objects in a given field (e.g. the "Objects" facet in Getty's Art and Architecture Thesaurus).	<edm:hasType rdf:resource=" http://terminology.lido-schema.org/lido00001 " />	✓
[Requirement 23]	An event in the lifecycle must be related to 1-n items.	Property	hasMet	http://www.europeana.eu/schemas/edm/hasMet	edm:hasMet relates a resource with the objects or phenomena that have happened to or have happened together with the resource under consideration. edm:hasMet is repeatable.	<edm:hasMet rdf:resource="DE-MUS-789911/lido/Fr70"/>	✓
[Requirement 24]	An event in the lifecycle of an item must be related to 0-n agents	Property	hasMet	http://www.europeana.eu/schemas/edm/hasMet	edm:hasMet relates a resource with the objects or phenomena that have happened to or have happened together with the resource under consideration. edm:hasMet is repeatable.	<edm:hasMet rdf:resource="http://d-nb.info/gnd/131724126"/>	✓

[Requirement 25]	The function/role of an agent during an event must be specified using controlled values (e.g. creator, dealer, collector).	Property		EDM only differentiates between creator, contributor and publisher			X
[Requirement 26]	An event in the lifecycle of an item must be related to 0-n places.	Property	happenedAt	http://www.europeana.eu/schemas/edm/happenedAt	This property associates an event with the place at which the event happened. edm:happenedAt is not repeatable.	<edm:happenedAt rdf:resource="http://vocab.getty.edu/tgn/7005246"/>	X
[Requirement 27]	An event in the lifecycle of an item must be related to 0-n date information.	Property	occurredAt	http://www.europeana.eu/schemas/edm/occurredAt	This property associates an event to the smallest known time span that overlaps with the occurrence of that event. edm:occurredAt is repeatable.	<edm:occurredAt rdf:resource="ex:myTimeSpan"/>	✓
Time	A time span related to a resource via an activity or as a topic	Entity	TimeSpan	http://www.europeana.eu/schemas/edm/TimeSpan	The class of “abstract temporal extents, in the sense of Galilean physics, having a beginning, an end and a duration” (CIDOC CRM)	<rdf:type rdf:resource="http://www.europeana.eu/schemas/edm/TimeSpan"/>	✓
[Requirement 29]	Date and time indication must be machine readable.	Property	begin	http://www.europeana.eu/schemas/edm/begin	This property denotes the start date of a period of time.	<edm:begin> 2007-03-12</edm:begin>	✓
			end	http://www.europeana.eu/schemas/edm/end	This property denotes the end data of a period of time.	<edm:end>2007-03-13</edm:end>	
[Requirement 30]	Date information must be compliant to date type standards.	Datatype		There is no statement about the use of datatypes in EDM. Therefore EDM may be used with any datatype that suits the		<edm:begin rdfs:datatype="W3CDTF">2007	✓

				projects purpose.		-03-12</edm:begin>	
[Requirement 80]	A human readable form of date information can only be used in addition to a machine readable form.	Value		All properties relating with a time span are repeatable		<edm:occurredAt rdf:resource="ex:myTimeSpan" ><emd:occuredAt rdf:resource= http://vocab.getty.edu/aat/300021141/ >	✓
[Requirement 81]	A human readable form of date information can use values of a controlled vocabulary.	value		edm:occurredAt must be used with non-literal values, dc:date may be used with non-literal values.		<edm:occurredAt rdf:resource="ex:myTimeSpan" ><emd:occuredAt rdf:resource= http://vocab.getty.edu/aat/300021141/ >	✓
Agent	A person, organization or group related to a resource via an activity or as a topic.	Entity	Agent	http://www.europeana.eu/schemas/edm/Agent	This class comprises people, either individually or in groups, who have the potential to perform intentional actions for which they can be held responsible.	<rdf:type rdf:resource="http://www.europeana.eu/schemas/edm/Agent" >	✓
[Requirement 32]	Agents must be identified by name and biographical information.	Property		EDM defined a set of metadata terms to identify and describe an agent (see https://github.com/europeana/corelib/wiki/EDMObjectTemplatesEuropeana#edmAgent)			✓
[Requirement 33]	Agents must be identified by identifiers that are unique, machine readable and persistent.	Property	identifier	http://purl.org/dc/element/1.1/identifier	An unambiguous reference to the resource within a given context.	<dcterms:identifier rdf:resource="http://d-nb.info/gnd/118554700"/>	✓
[Requirement 34]	Agent descriptions can interlink with resources related to the agent.	Property					✗
[Requirement 35]	Agent descriptions must be machine			EDM supports a machine readable structured description			✓

	readable.			of resources in RDF.			
[Requirement 36]	Agent descriptions can interlink with places related to the agent.	Property	wasPresentAt	http://www.europeana.eu/schemas/edm/wasPresentAt	This property associates the people, things or information resources with an event at which they were present.	<pre><edm:Actor rdf:about="http://d-nb.info/gnd/118554700"><edm:wasPresentAt rdf:resource="ex:myTripToGoettingen"/></edm:Actor> <edm:Event rdf:about="ex:myTripToGoettingen"><edm:happenedAt rdf:resource="http://vocab.getty.edu/tgn/7005246"/></edm:Event></pre>	✓
[Requirement 37]	The relation between an agent and a place can be specified by the character of the relation (e.g. visitor or resident)	Property	hasType	http://www.europeana.eu/schemas/edm/hasType	This property relates a resource with the concepts it belongs to in a suitable type system such as MIME or an thesaurus that captures categories of objects in a given field (e.g. the “Objects” facet in Getty’s Art and Architecture Thesaurus).	<pre><edm:Actor rdf:about="http://d-nb.info/gnd/118554700"><edm:wasPresentAt rdf:resource="ex:myTripToGoettingen"/></edm:Actor> <edm:Event rdf:about="ex:myTripToGoettingen"><edm:happenedAt rdf:resource="http://vocab.getty.edu/tgn/7005246"/><edm:hasType rdf:resource="http://terminology.lido-schema.org/lido00223"/></edm:Event></pre>	✓

[Requirement 38]	The relation between an agent and a place can be specified by the time this relation was valid.	Property	occurredAt	http://www.europeana.eu/schemas/edm/occurredAt	This property associates an event to the smallest known time span that overlaps with the occurrence of that event.	<code><edm:Actor rdf:about="http://d-nb.info/gnd/118554700"><edm:wasPresentAt rdf:resource="ex:myTripToGoettingen"/></edm:Actor></code> <code><edm:Event rdf:about="ex:myTripToGoettingen"><edm:happenedAt rdf:resource="http://vocab.getty.edu/tgn/7005246"/><edm:occurredAt rdf:resource="ex:myTimeSpan"/></edm:Event></code>	✓
Place	A geographic location related to a resource via an activity or topic.	Entity	Place	http://www.europeana.eu/schemas/edm/Place	An "extent in space, in particular on the surface of the earth, in the pure sense of physics: independent from temporal phenomena and matter" (CIDOC CRM)	<code><rdf:type rdf:resource="http://www.europeana.eu/schemas/edm/Place"/></code>	✓
[Requirement 39]	Places must be identified by identifiers that are unique, machine readable and persistent.	Property	about	http://www.w3.org/1999/02/22-rdf-syntax-ns#about		<code><edm:Place rdf:about="http://vocab.getty.edu/tgn/7005246"></code>	✓
[Requirement 40]	Places must be identified by machine readable geo-information / geographic coordinates	Datatype	lat	http://www.w3.org/2003/01/geo/wgs84_pos#lat	The WGS84 latitude of a Spatial Thing (decimal degrees).	<code><wgs84_pos:lat>26.58</wgs84_pos:lat><wgs84_pos:long>-97.83</wgs84_pos:long></code>	✓
			long	http://www.w3.org/2003/01/geo/wgs84_pos#long	The WGS84 longitude of a Spatial Thing (decimal degrees).		

			alt	http://www.w3.org/2003/01/geo/wgs84_pos#alt	The WGS84 altitude of a Spatial Thing (decimal meters above the local reference ellipsoid).		
[Requirement 41]	Place descriptions can include 1-n place appellations.	Property	prefLabel	http://www.w3.org/2004/02/skos/core#prefLabel	The preferred lexical label for a resource, in a given language.	<skos:prefLabel>Sankt-Petersburg</skos:prefLabel><skos:altLabel>Petersburg</skos:altLabel>	✓
			altLabel	http://www.w3.org/2004/02/skos/core#altLabel	Acronyms, abbreviations, spelling variants, and irregular plural/singular forms may be included among the alternative labels for a concept.		
Digital Representation	A digital resource depicting an item	Entity	WebResource	http://www.europeana.eu/schemas/edm/WebResource	Information Resources that have at least one Web Representation and at least a URI.	<code><rdf:type rdf:resource="http://www.europeana.eu/schemas/edm/WebResource"/></code>	✓
[Requirement 43]	A digital representation/copy must enable the identification of the item it represents.			Out of scope			✗
[Requirement 45]	The nature of a digital representation must be described using a controlled value.	Property	type	http://www.w3.org/1999/02/22-rdf-syntax-ns#	rdf:type is an instance of rdf:Property that is used to state that a resource is an instance of a class	<code><rdf:type rdf:resource="http://purl.org/dc/dcmitype/Image"/></code>	✓
[Requirement 60]	Descriptions of digital representations must provide information about the reusability of the digital representation (e.g.	Property	rights	http://www.europeana.eu/schemas/edm/rights	Information about copyright, usage and access rights of the digital object in Europeana that represents the source cultural heritage object	<code><edm:rights rdf:resource="http://creativecommons.org/publicdomain/zero/1.0"/></code>	✓

	license).				described in the data.		
[Requirement 61]	Descriptions of a digital representation must provide contact information related to the usability of a digital copy.	Property					X
[Requirement 82]	Digital representations must be identified by identifiers that are unique, machine readable and persistent.	Property	about	http://www.w3.org/1999/02/22-rdf-syntax-ns#about		<edm:WebResource rdf:about="urn:nbn:de:bsz:105-db-id4104242509">	✓
Collection	An aggregation of items:	Entity					X
[Requirement 46]	Collection descriptions must be machine readable.			EDM does not specify the descriptions of collections.			X
[Requirement 47]	Collections must be identified by identifiers that are unique, machine readable and persistent.	Property					X
[Requirement 48]	Collections must be identified by an explicit name.	Property					X
[Requirement 49]	Collection descriptions must include information about the location/place of the collection.	Property					X
[Requirement 50]	Collection descriptions must be compliant to a cross-domain metadata standard.						X
Statement	A predication about an item.	Entity					X
[Requirement 31]	A statement can be interlinked with	Property		EDM doesn't say anything about the description of			X

	date information.			statements.			
[Requirement 53]	All statements must be repeatable.	Property		EDM defines some properties as non-repeatable (e.g. edm:happenedAt)			X
[Requirement 73]	Statements can be interlinked with information about their origin.	Property					X
[Requirement 74]	Statements can be interlinked with resources.	Property					X
[Requirement 54]	Statements can be interlinked with resources proving their reliability.	Property					X
[Requirement 55]	Inconsistency of statements is allowed if the metadata refers to the origin of the statements.	Validation					X
[Requirement 86]	A statement can related to 0-n places.	Property					X
Holding	The place an item is located, subclass of place	Entity	Place	http://www.europeana.eu/schemas/edm/Place	An “extent in space, in particular on the surface of the earth, in the pure sense of physics: independent from temporal phenomena and matter” (CIDOC CRM)	<rdf:type rdf:resource="http://www.europeana.eu/schemas/edm/Place" />	✓
[Requirement 83]	Holdings must be identified by identifiers that are unique, machine readable and persistent	Property	about	http://www.w3.org/1999/02/22-rdf-syntax-ns#about		<edm:Place rdf:about="http://ld.zdb-services.de/resource/organisations/DE-7"/>	✓
[Requirement 84]	Holdings can be identified by machine readable geo-information /	Property	lat	http://www.w3.org/2003/01/geo/wgs84_pos#lat	The WGS84 latitude of a Spatial Thing (decimal	<wgs84_pos:lat>26.58</wgs84_pos:lat><wgs84_pos:long>-	✓

	geographic coordinates.				degrees).	97.83</wgs84_pos:long>	
			long	http://www.w3.org/2003/01/geo/wgs84_pos#long	The WGS84 longitude of a Spatial Thing (decimal degrees).		
[Requirement 85]	Holding descriptions must include 1-n place appellations.	Property	prefLabel	http://www.w3.org/2004/02/skos/core#prefLabel	The preferred lexical label for a resource, in a given language.	<skos:prefLabel>Sankt-Petersburg</skos:prefLabel><skos:altLabel>Petersburg</skos:altLabel>	✓
			altLabel	http://www.w3.org/2004/02/skos/core#altLabel	Acronyms, abbreviations, spelling variants, and irregular plural/singular forms may be included among the alternative labels for a concept.		
[Requirement 58]	Holding descriptions must provide contact information.	Property					✗
Concept	A term from a controlled vocabulary	Entity	Concept	http://www.w3.org/2004/02/skos/core#Concept	A SKOS concept can be viewed as an idea or notion; a unit of thought. However, what constitutes a unit of thought is subjective, and this definition is meant to be suggestive, rather than restrictive. The notion of a SKOS concept is used to refer to specific ideas or meanings established within a knowledge organization system and describe their conceptual structure.	<rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>	✓

[Requirement 66]	Controlled values used for the description of resources must be values of a domain-specific or a cross-domain standard.	Value		EDM does not refer to any standards but most of the properties may be used with non-literal values, which makes the use of controlled terms identified by a URI possible.			✓
[Requirement 67]	Controlled values used for the description of resources must be identified by identifiers that are unique, machine readable and persistent.	Property	about	http://www.w3.org/1999/02/22-rdf-syntax-ns#about		<skos:Concept rdf:about="http://id.loc.gov/authorities/subjects/sh85138958" >	✓
[Requirement 68]	The used controlled vocabularies must be available in machine readable form.	Value		As an instance of a skos:Concept terms must be machine readable.			✓
[Requirement 69]	The used controlled vocabularies must be available open access.	Value		Out of scope.			✗
[Requirement 70]	Synonym appellations must be merged using authorities.	Property	prefLabel	http://www.w3.org/2004/02/skos/core#prefLabel	The preferred lexical label for a resource, in a given language.	<skos:prefLabel>Runkelrübe </skos:prefLabel><skos:altLabel>Zuckerrübe</skos:altLabel>	✓
			altLabel	http://www.w3.org/2004/02/skos/core#altLabel	Acronyms, abbreviations, spelling variants, and irregular plural/singular forms may be included among the alternative labels for a concept.		